

IN THE CLAIMS

1. (Original) A method of encoding an input digital signal for lossless transmission via a medium (15), the method comprising the steps of:

- receiving the input digital signal comprising at least one packet of digital data; and
- calculating a checksum of the at least one packet of the input digital signal;  
characterised in that the method comprises the further steps of:
- encoding the packet of the input signal into an encoded packet of digital data; and
- adding the associated checksum to the encoded packet to form an encoded signal.

2. (Original) A method as claimed in claim 1, in which the associated checksum is added to the encoded packet as a separate packet.

3. (Previously presented) A method as claimed in claim 1, in which the checksum is a cyclic redundancy checksum.

4. (Previously presented) A method as claimed in claim 1, in which the method comprises the further step of channel encoding, to enable a lossless transmission via the medium (15).

5. (Currently amended) A method of decoding an encoded signal obtained by ~~the encoding method according to claim 1~~ + calculating a checksum of at least one packet of a input digital signal, encoding the packet of the input signal into an encoded packet of digital data, and adding the associated checksum to the encoded packet to form the encoded signal, comprising the steps of:

- receiving the encoded signal;
- extracting the encoded packet and associated checksum from the received encoded signal;
- decoding the encoded packet into a decoded packet comprising the input digital signal;
- calculating a checksum for the decoded packet; and
- if the calculated checksum corresponds with the extracted checksum, outputting the decoded packet as an output signal.

6. (Original) A method as claimed in claim 5, in which the method comprises the further step of interpolating the decoded packet if the calculated checksum and the extracted checksum are unequal.

7. (Original) A method as claimed in claim 5, in which the method comprises the further step of muting the decoded packet if the calculated checksum and the extracted checksum are unequal.

8. (Currently amended) A method as claimed in claim 5, ~~when dependent on claim 4, wherein the encoded signal has been channel encoded~~, comprising the further step of channel decoding before the step of receiving the encoded signal, to enable a lossless transmission via the medium (15).

9. (Original) An apparatus (10) for encoding an input digital signal comprising at least one packet of digital data for lossless transmission via a medium (15), the apparatus (10) comprising:

- first calculation means (12) for calculating a checksum of the at least one packet of the input digital signal;

characterised in that the apparatus further comprises:

- encoding means (11) for lossless encoding of the at least one packet into an encoded packet of digital data; and
- composition means (13) connected to the calculation means (12) and encoding means (11) for adding the associated checksum to the encoded packet to form an encoded signal.

10. (Original) An apparatus as claimed in claim 9, in which the composition means (13) are arranged to add the associated checksum to the encoded packet as a separate packet.

11. (Previously presented) An apparatus as claimed in claim 9, in which the calculation means (12) are arranged for calculating the checksum as a cyclic redundancy checksum.

12. (Previously presented) An apparatus as claimed in claim 9, in which the apparatus further comprises channel encoding means (16) connected to the composition means (13) and being arranged to enable a lossless transmission via the medium (18).

13. (Currently amended) An apparatus (20) for decoding an encoded signal obtained from the ~~encoding apparatus according to claim 10 by calculating a checksum of at least one packet of a input digital signal, encoding the packet of the input signal into an encoded packet of digital data, and adding the associated checksum to the encoded packet to form the encoded signal,~~ comprising:

- extracting means (21) for receiving the encoded signal and extracting the encoded packet and associated checksum from the received encoded signal;
- decoding means (22) connected to the extracting means (21) for decoding the encoded packet into a decoded packet comprising the input digital signal;
- second calculation means (23) connected to the decoding means (22) for calculating a checksum for the decoded packet; and
- output means (24, 25) connected to the extracting means (21), second calculation means (23) and decoding means (22) for outputting the decoded packet as an output signal if the calculated checksum corresponds with the extracted checksum.

14. (Original) An apparatus as claimed in claim 13, in which the output means (24, 25) are further arranged for interpolating the decoded packet if the calculated checksum and the extracted checksum are unequal.

15. (Original) An apparatus as claimed in claim 13, in which the output means (24, 25) are further arranged for muting the decoded packet if the calculated checksum and the extracted checksum are unequal.

16. (Previously presented) An apparatus as claimed in claim 13, ~~when dependent on claim 12, wherein the encoded signal has been channel encoded~~, further comprising channel decoding means (17) connected to the extracting means (21), the channel decoding means (17) being arranged to enable a lossless transmission via the medium.

17. (Previously presented) A signal comprising at least a packet of a first type and a packet of a second type, obtained by the method as claimed in claim 1.

18. (Original) A storage medium comprising a signal as claimed in claim 17.

19. (New) A method as claimed in claim 1, in which the input digital signal is an audio signal conforming to the Direct Stream Digital standard, and the encoding step includes Direct Stream Transfer coding.

20. (New) A method as claimed in claim 19, in which the checksum adding step includes inserting the checksum as an audio information packet.